

Sections 7035 and 7036

(October 2002)

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**NON-WATERSHED INCIDENT
OPERATIONS AND SAFETY**
(October 2002)

7035

STRUCTURE FIRES
(October 2002)

7036

SIZE-UP
(October 2002)

7036.1

Size-up is a critical component of any emergency response: it is the basis for all decisions that follow. A good size-up lays the foundation for successful incident mitigation. Initial size-up is done by the first-in officer, and is continued by any additional officer(s) who might respond and assume command.

COMMUNICATIONS AND COORDINATION
(October 2002)

7036.2

Communications will always be a vital link in any emergency response. This is particularly true of the report on conditions provided by the first-in fire officer. He or she is the eyes and ears of the other response personnel that follow. The report on conditions is also the time when the first-in officer generally assumes command of the incident.

A report on conditions should contain the following information:

- Notification of arrival on scene
- A brief description of the occupancy
- Occupancy status
- Statement of actual conditions
- Instructions to other responding units
- An estimation of resources required
- Implementation of the command structure

TACTICAL PRIORITIES
(October 2002)

7036.3

The acronym **RECEO** is used to help fire officers remember the essential fire ground divisions or priorities. Those divisions include rescue, exposure, confinement, extinguishment and overhaul. Two additional divisions, ventilation and salvage are incorporated into the fire ground operations where appropriate. Although they are listed in order of their general importance, they may need to be accomplished in a different order depending on the situation and resources available.

Rescue

Ventilation

Exposure protection

Salvage

Confinement

Extinguishment

Overhaul

RESCUE

7036.4

(October 2002)

- Life safety is the first priority at any emergency.
- Before firefighters even consider rescue, they must first think of their own personal safety.
- A primary and secondary search should be considered at all structure fires where appropriate.

EXPOSURE PROTECTION

7036.5

(October 2002)

- Exposure protection is the strategy of preventing a fire from spreading into currently uninvolved areas and compounding the problem.
- How urgent this tactical priority is will depend in part on proximity of other structures, building construction and type of occupancy, exposure protection is a defensive action.

CONFINEMENT

7036.6

(October 2002)

- The strategy of confinement means preventing the fire from extending to uninvolved sections of the building.
- Both the fire and products of combustion must be kept from spreading either horizontally or vertically.
- All avenues of the fire spread should be secured (examples: shafts, openings, utility raceways, ducts etc).
- It may also include the use of built-in fire protection features such as automatic sprinkler or extinguishing systems, fire doors and dampers and building ventilation systems.

EXTINGUISHMENT

7036.7

(October 2002)

- Extinguishment is an offensive operation involving the application of water or other extinguishing agents i.e. foam, dry chemicals, etc.

OVERHAUL

7036.8

(October 2002)

- The purpose of overhaul is to make sure the fire is completely out.
- Overhaul operations must be properly coordinated with fire investigation efforts.
- Unsafe conditions should be identified early in the overhaul process and definite efforts made to avoid the possible problems associated with the same.

- During overhaul most firefighters are more relaxed. Caution should be taken because firefighters may be tired, perhaps less alert and thus more apt to get injured.
- Personnel should not remove their breathing apparatus until the area is completely cleared of toxic gases.
- When available, a fresh crew should perform overhaul.
- Particular attention should be given to hidden areas during overhaul.
- During overhaul care should be given to protect personnel from exposure to carbon monoxide and other by products of combustion.

VENTILATION (October 2002)

7036.9

- Ventilation may occur anytime during the life of the incident. Ventilation may be employed to channel heat, smoke and flames from potential victims, preventing backdraft and flashover.
- Ventilation will allow the interior of the structure to be more tenable and safer for fire fighting operations.

SALVAGE (October 2002)

7036.10

Salvage should be done as soon as possible to minimize damage from fire, smoke, water, etc.

- Salvage is required to safe guard personal property, furnishings, and the unaffected portions of a structure from the effects of heat, smoke, fire and the weather.
- Salvage includes:
 - Use of salvage covers
 - Removing water from the structure
 - Removing furniture and personal belongings to a safe location.
 - Debris removal
 - Separating valuables from debris.
 - Covering openings and secure the building.

TACTICAL CONSIDERATIONS FOR THE LIFE SAFETY OF THE OCCUPANTS (October 2002)

7036.11

- Fire ground operations shall be coordinated and conducted in such a manner as to support life safety operations.
- Hose line placement and ventilation shall be coordinated so as affect safe and efficient rescue operations.
- Use normal means of egress first e.g. halls, stairs.
- Aerial ladders, hand ladders, fire escapes are considered to be secondary means of egress.

- Provide for the care and medical needs of victims who have been removed from the fire building.

IMMEDIATELY DANGEROUS TO LIFE AND HEALTH ATMOSPHERE (IDLH) INCIDENTS **7036.12**
(October 2002)

IDLH is defined as an atmosphere that poses an immediate threat to life, would cause irreversible adverse health effects, or would impair an individual's ability to escape from a dangerous atmosphere.

- Interior operations include the physical activity of fire suppression, rescue, or any emergency activities inside of buildings, enclosed structures, or confined spaces.
- Interior structural fire fighting operations, as defined in this policy, are those operations involving a fire situation beyond the incipient stage.
- Incipient stage of development is defined as being a fire, which is in the initial or beginning stage and can be controlled or extinguished by means of a portable fire extinguisher, Class II stand-pipe or small hose systems without the need for protective clothing or breathing apparatus. Any structure fire beyond the incipient stage is considered to be IDLH.

MINIMUM REQUIREMENTS FOR INTERIOR OPERATIONS WITHIN IDLH ATMOSPHERES: **7036.12.1**
(October 2002)

- A. Full protective clothing including SCBAs, shall be worn.
- B. The buddy system will be used.
- C. The *Back Up Crew* (BUC) and/or *Rapid Intervention Crew* (RIC) shall be established when Entry Crews are assigned or in the IDLH and will maintain constant monitoring, using visual, voice, or signal communications.
- D. Entry Crews will be backed up:
 - On an initial entry into an IDLH atmosphere a BUC will be immediately available.
 - On an extended entry when additional resources are available or ordered a RIC will be established.
 - Either crew will provide the minimum safety back up required for entry into an IDLH atmosphere.
 - Incident Commander or Accountability Officer to be notified prior to entry.

EXCEPTION
(October 2002)

7036.12.2

If, upon arriving at the scene, firefighters find an imminent life-threatening situation where immediate action may prevent the loss of life or serious injury, the above requirements may be suspended.

When such immediate action is necessary the Emergency Command Center (ECC) will be notified. The ECC shall notify all responding resources that an entry is in progress. Responding resources shall provide the necessary rescue support and backup upon their arrival.

FIRE-GROUND ACCOUNTABILITY
(October 2002)

7036.13

Accountability is directly related to supervision. It is the responsibility of all supervisors, officers and the IC to maintain a level of supervision that accounts for the location and function of all personnel at every incident. Essentially, personnel accountability is an effort to improve the safety of emergency responders by keeping track of their locations and assignments when operating at the same incident. Accountability can be maintained in many different ways. However, irrespective of the type of Personnel Accountability System (PAS) implemented, the goals are generally similar.

A properly implemented PAS will help to ensure that the incident command staff knows the exact number and identity of personnel working at an incident, their approximate locations, and whether they are in distress. In some form or another, regardless of size or nature, personnel accountability is a part of every incident to which emergency personnel may respond. Failure to maintain personnel accountability can, and does, have tragic results. In the event that an emergency responder is injured or other wise incapacitated on the scene of an emergency, a properly functioning PAS should assist rescuers to locate the personnel in trouble and get them to safety quickly.

Accountability Systems/Procedures:

- Must mesh with operational guidelines for incident management and Rapid Intervention Crews.
- Must identify when accountability systems will be used, the point of supervision, and how entry control to the incident will be established.
- Should be flexible enough to be used for any incident when personnel are operating out of sight of the IC, the incident hazard level is high, incident conditions are changing rapidly, or as other situations dictate.
- Should be able to accommodate non-departmental personnel when required. For example, police, ambulance, investigation personnel, utilities staff or other similar concerned persons.

Incident Commander Must Ensure:

- That he/she conducts an initial size-up and risk assessment of the incident scene before assigning personnel to specific tasks.
- That he/she always maintains accountability for all personnel at a fire scene--both by location and function.
- The establishment of (RICs)--often called Rapid Intervention Teams--and make sure they are positioned to respond immediately to appropriate emergencies.
- That at least four firefighters are on the scene before beginning interior fire fighting at a structural fire (two firefighters inside the structure and two outside).
- Firefighters who enter hazardous areas (such as burning or suspected unsafe structures) are equipped to maintain two-way communications with command.
- That standard operating procedures and equipment are adequate and sufficient to support radio traffic at multiple-responder fire scenes.
- That all firefighters, involved in structural fire fighting, rescue, or other hazardous duties (non-wildland fire fighting) are to be equipped, wear, and activate Personal Alert Safety System (PASS) devices.
- All firefighters are aware of danger or retreat notification method.
- The ability to transmit the correct audible tone or alert immediately when conditions become unsafe for firefighters.
- That a collapse zone is established around buildings with parapet walls.

TWO IN/TWO OUT (October 2002)

7036.14

Two In/Two out requires a standby crew of at least two members to be organized to back up the initial entry crew of two members before they enter into an IDLH atmosphere. Conditions present at the other emergency response operations that create an IDLH atmosphere or unknown atmosphere, also requires adherence to Two IN/Two Out.

Two In/Two Out requires a minimum of four personnel on scene to begin interior structural firefighting operations.

Personnel operating in IDLH conditions shall operate in crews of two or more.

- These crews shall be equipped with self-contained breathing apparatus (SCBA) and other personal protective equipment based upon the hazards.
- The teams or crews shall be in communication with each other through visual, voice, signal, physical or safety guide ropes.
- Crews inside the hazard zone shall maintain radio communication with personnel outside the hazard zone.

The incident commander shall designate at least two members to act as the RIC assigned to stand by outside of the hazard area to provide immediate assistance to entry crewmembers.

- The RIC shall be equipped with personal protective equipment equal to the interior crew.
- The RIC shall maintain constant communication with the interior crew by monitoring the radio frequency assigned to the interior crews.
- The RIC shall maintain an awareness of the location, the number, the identity, and the time of entry of the interior crew.

Once a second crew is assigned or operating in the hazardous area, the incident shall no longer be considered in the initial stages and at least one RIC Company shall be designated. It is not mandatory to have “two out” for every “two in”. The number of RIC Companies shall be incident driven and determined by the IC. RIC shall be implemented as part of the incident command and accountability systems.

BACK UP CREW (BUC)

7036.14.1

(October 2002)

A BUC is used for initial entries. The BUC shall have one member in appropriate *Personal Protective Equipment* (PPE) on immediate standby in support of the IDLH entry crew. The second BUC member must have appropriate PPE on but may provide other incident support activities. This member must be ready to assist in any rescue effort in support of the Entry Crew. The BUC is used primarily for initial response forces and should revert to a RIC when additional resources are available.

RAPID INTERVENTION CREWS (RIC)

7036.14.2

(October 2002)

Rapid Intervention Crews (RIC) are utilized on emergency incidents for the rescue of firefighters in distress or entrapment. Personnel are assigned to search, locate and remove firefighters who become trapped or lost on emergency incidents. Rapid Intervention Crews must have a basic knowledge of building construction and rescue techniques. Rapid Intervention Crews are not to be utilized for any operation other than the rescue of firefighters on the emergency incident.

The physical and mental demands associated with firefighting and other emergency operations, coupled with the environmental dangers of extreme heat and humidity or extreme cold, create conditions that can have an adverse impact upon the safety and health of the individual emergency responder. Members who are not provided adequate rest and rehydration during emergency operations or involved in a physical fitness program are at increased risk for illness or injury, and may jeopardize the safety of others on the incident scene. When emergency responders become fatigued, their ability to operate safely is impaired. As a result, their reaction time is reduced and their ability to make critical decisions diminishes. Rehabilitation is an essential element on the incident scene to prevent more serious conditions such as heat exhaustion or heat stroke from occurring.

The need for emergency incident rehabilitation is cited in several national standards. Recent studies have concluded that a properly implemented fire ground rehabilitation program will result in fewer accidents and injuries to firefighters. Moreover, responders who are given prompt and adequate time to rest and rehydrate may safely re-enter the operational scene, which may reduce the requirement for additional staffing at an incident.

An emergency incident rehabilitation program can be established on any emergency incident with a minimal impact on human, fiscal, and equipment-related resources. A successful rehabilitation program will improve employee morale and increase their level of productivity. It fits into the framework of the incident command system.

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